

WHAT IS CLAIMED IS:

1 1. A method for the assembly of a thin film comprising the steps of:

2 (a) applying a substrate to a support surface;

3 (b) forming a thin film upon said substrate by the substeps of:

4 (i) immersing said substrate in a first aqueous solution or dispersion of a first

5 substance, said first substance having an affinity for said substrate;

6 (ii) rinsing said substrate with neat solvent;

7 (iii) immersing said substrate in a second solution or dispersion of a second

8 substance, said second substance having an affinity for said first

9 substance; and

10 (iv) rinsing said substrate with neat solvent;

11 (d) removing said substrate together with said thin film from said support; and

12 (e) separating said substrate from said thin film.

1 2. The method of claim 1 further including the additional step of:

2 (b)(v) repeating steps (b)(i) through (b)(iv) a predetermined number of times.

1 3. The method of claim 2 further comprising for at least one repetition of step (b)(i),

2 replacing the solution or dispersion of said first substance with a solution or dispersion

3 of a third substance, said third substance having an affinity similar to said first substance.

1 4. The method of claim 3 wherein for at least one repetition of step (b)(i), said solution or

2 dispersion of a substance is of a biological compound.

1 5. The method of claim 2 further comprising for at least one repetition of step (b)(iii),
2 replacing the solution or dispersion of said second substance with a solution or dispersion
3 of a third substance, said third substance having an affinity similar to said second
4 substance.

3 7. The method of claim 2 further comprising substituting for at least one repetition of step
4 (c)(i) or (c)(iii), a solution or dispersion of a structural stabilizing material.

8. A thin film constructed according to the method of claim 1.